

Mink3a protein sequence

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1  MGD PAPARSLDDIDLSALRDPAGIFELVEVVGNGTYGQVYKGRHVKTGQLAAIKVMDVTE
61  DEEEEIKQEINMLKKYSHHRNIATYYGAFIKKSPPGNDDQLWLVMEFCGAGSVTDLVKNT
121 KGNALKEDCIAYICREILRGLAHLHAHKVIHRDIKGQNVLLTENA EVKLVD FGVSAQLDR
181 TVGRRNTFIGTPYWMAPEVIACDENPDATYDYRSDIWSLGITAIEMAEGAPPLCDMHPMR
241 ALFLIPRNP PRLKSKKWSKKFIDFIDTCLIKTYLSRPTEQLLKFPFIRDQPTERQVRI
301 QLKDHIDRSRKRKGEKEETEYEYSGSEEDDSHGEEGEPSSIMNVPGESTLRREFLRLQQ
361 ENKSNSEALKQQQQQLQQQQRDPEAHIKHLLHQRRRIEEQKEERRRVEEQRREREQRK
421 LQEKEQQRRLED MQALRREERRQAEREQEYKRKQLEEQRQSERLQRLQQLQEHAYLKS LQ
481 QQQQQQQQLQKQQQQQLLPGRKPLYHYGRGMNPADKPAWAREVEERTRMNKQONSPLAKS
541 KPGSTGPEPPIQASPGPPGPLSQTPPMQRPVEPQEGPHKSLQDQPTRNLAAFPASHDPD
601 PAIPAPTATPSARGAVIRQNSDPTSEGPGSPNPPAWVRPDNEAPPKVPQRTSSIATALN
661 TSGAGGSRPAQAVRARPRSNSAWQIYLQRRARERTPKPPGPPAQP GPPPNASSNPDLRRS
721 DPGWERSDSVLPASHGHLPOAGSLERNRVGASSKLDSSPVLSPGNKAKPDDHRSRPGRPA
781 D FVLLKERTLDEAPRPPKKAMDYSSSSSEEVESSEDEEEGEGGPAEGSRDTPGGRSDGDT
841 DSVSTMVVHDVEEITGTQPPYGGGT MVVQRTPEEERNLLHADSNGYTNLPDVVQPSHSPT
901 ENSKGQSPPSKDGSGDYQSRGLVKAPGKSSFTMFVDLGIYQPGGSGDSIPITALVGEGT
961 RLDQLQYDVRKGSVNVNPTNTRAHSETPEIRKYKRFNSEILCAALWGVNLLVGTENGL
1021 MLLDRSGQKQVYGLIGRRRFQ QMDVLEGLNLLITISGKRNLKRVYYLSWLRNKILHNDPE
1081 VEKKQGWTTVGDMEGCGHYRVVKYERIKFLVIALKSSVEVYAWAPKPYHKFMAFKSFADL
1141 PHRPLLVDLTVEEGQRLKVIYSSAGFHAVD VDSGNSYDIYIPVHIQSQITPHAIIFLPN
1201 TDGMEMLLCYEDEGVYVNTYGRIIKDVVLQWGEMPTSVAYICSNQIMGWGEKAIEIRSVE
1261 TGHLDGVFMHKRAQRLKFLCERNDKVFFASVRSGSSQVYFMTLNRNCIMNW

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Mink3a nucleotide sequence

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GCCCTTATGGGCGACCCAGCCCCGCCCCG
AGCCTGGACGACATCGACCTGTCCGCCCTGCGGGACCCTGCTGGGATCTTTGAGCTTGTG
GAGGTGGTGGCAATGGAACCTACGGACAGGTGTACAGGGTCGGCATGTCAAGACGGGG
CAGCTGGCTGCCATCAAGGTATGGATGTACGGAGGACGAGGAGGAAGAGATCAACAG
GAGATCAACATGTGAAAAAGTACTCTCACCACCGCAACATCGCCACCTACTACGGAGCC
TTCATCAAGAAGAGCCCCCGGAAACGATGACCAGCTCTGGCTGGTGATGGAGTTCTGT
GGTGCTGGTTCACTGACTGACCTGGTAAAGAACACAAAAGGCAACGCCCTGAAGGAGGAC
TGATCGCCTATATCTGCAGGGAGATCCTCAGGGGTCTGGCCCATCTCCATGCCACAAAG
GTGATCCATCGAGACATCAAGGGGCGAATGTGCTGCTGACAGAGAATGCTGAGGTCAAG
CTAGTGGATTTTGGGGTGAGTGCTCAGCTGGACCGCACCGTGGGCAGACGGAACACTTTC
ATTGGGACTCCCTACTGGATGGCTCCAGAGGTCACTGCCCTGTGATGAGAACCTGATGCC
ACCTATGATTACAGGAGTGATATTTGGTCTCTAGGAATCACAGCCATCGAGATGGCAGAG
GGAGCCCCCCTCTGTGTGACATGCACCCATGCGAGCCCTCTCCTCATCTCCTCGGAAC
CCTCGGCCAGGCTCAAGTCCAAGAAGTGGTCTAAGAAGTTCATTGACTTCATTGACACA
TGCTCATCAAGACTTACCTGAGCCGCCACCCACGGAGCAGCTACTGAAGTTTCCCTTC
ATCCGGGACCGCCACGGAGCGGCAGGTCCGCATCCAGCTTAAGGACCACATTGACCGA
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TTAAAACAGCAGCAGCAGCTGCAGCAGCAGCAGCAGCAGGACCCGAGGCACACATCAA
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CGGCTGGAGGACATGCAGGCTCTGCGGCGGGAGGAGGAGCGGCGGAGCGGAGCGTGAG
CAGGAATACAAGCGGAAGCAGCTGGAGGAGCAGCGGCAGTCAGAACGTCTCCAGAGGCAG
CTGCAGCAGGAGCATGCCATCCTCAAGTCCCTGCAGCAGCAGCAACAGCAGCAGCAGCTT
CAGAAACAGCAGCAGCAGCAGCTCCTGCCTGGGGACAGGAAGCCCCCTGTACCATTATGGT
CGGGGCATGAATCCCGCTGACAAACAGCCTGGGCCCGAGAGGTAGAAGAGAGAACAAGG
ATGAACAAGCAGCAGAACTCTCCCTTGGCCAAGAGCAAGCCAGGCAGCAGCGGGCCTGAG
CCCCCATCCCCAGGCTCCCCAGGGCCCCCAGGACCCCTTCCCAGACTCCTCCTATG
CAGAGGCGGCTGGAGCCCCAGGAGGACCGCACAACTCCCTGCAGGACAGCCACCCGA
AACCTGGCTGCCTTCCAGCCTCCCATGACCCGACCCTGCCATCCCCGCACCCACTGCC
ACGCCCAGTGCCCGAGGAGCTGTATCCGCCAGAATTACAGACCCACCTCTGAAGGACCT
GGCCCCAGCCGAATCCCCAGCCTGGGTCCGCCAGATAACGAGGCCCCACCCAAGGTG
CCTCAGAGGACCTCATCTATCGCCACTGCCCTTAACACCAGTGGGGCCGGAGGGTCCCGG
CCAGCCCAGGCAGTCCGTGCCAGACCTCGCAGCAACTCCGCTGGCAAATCTATCTGCAA
AGGCGGGCAGAGCGGGGACCCCCAAGCCTCCAGGGCCCCCTGCTCAGCCCCCTGGCCCG
CCCAACGCTCTAGTAACCCGACCTCAGGAGGAGGACCCCTGGCTGGGAACGCTCGGAC
AGCGTCTTCCAGCCTCTCAGGGCACCTCCCCAGGCTGGCTCACTGGAGCGGAACCGC
GTGGGAGCCTCTCCAACTGGACAGCTCCCTGTGCTCTCCCTGGGAATAAAGCCAAG

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Fig. 1

Sheet 1

CCCGACGACCACCGCTCACGGCCAGGCCGCGCCCGCAGACTTTGTGTTGCTGAAAGAGCGG
 ACTCTGGACGAGGCCCTCGGCCCTCCCAAGAAGGCCATGGACTACTCGTCCAGCGAG
 GAGGTGGAAGCAGTGAGGACGACGAGGAGGAAGGCGAAGGCGGCCAGCAGAGGGGAGC
 AGAGATACCCCTGGGGGCGCAGCGATGGGGATACAGACAGCGTCAGCACCATGGTGGTC
 CACGACGTCGAGGAGATCACGGGGACCCAGCCCCATACGGGGGCGGCACCATGGTGGTC
 CAGCGACCCCTGAAGAGGAGCGGAACCTGCTGCATGCTGACAGCAATGGGTACACAAAC
 CTGCCTGACGTGGTCCAGCCCAGCCACTCACCACCGAGAACAGCAAAGGCCAAAGCCCA
 CCCTCGAAGGATGGGAGTGGTGACTACCACTCTCGTGGGCTGGTAAAGGCCCTGGCAAG
 AGCTCGTTACAGATGTTTGTGGATCTAGGGATCTACCAGCCTGGAGGAGTGGGGACAGC
 ATCCCCATCACAGCCCTAGTGGGTGGAGAGGGCACTCGGCTCGACCAGCTGCAGTACGAC
 GTGAGGAAGGTTCTGTGGTCAACGTGAATCCCAACACCCGGGCCACAGTGAGACC
 CCTGAGATCCGGAAGTACAAGAAGCGATTCAACTCCGAGATCCTCTGTGCAGCCCTTTGG
 GGGTCAACCTGCTGGTGGGCACGGAGAACGGGCTGATGTTGCTGGACCGAAGTGGGCAG
 GGCAAGGTGTATGGACTCATTGGGCGGCACGCTTCCAGCAGATGGATGTGCTGGAGGGG
 CTCACCTGCTCATCACCATCTCAGGGAAGGAACAACTGCGGGTGTATTACCTGTCC
 TGGCTCCGGAACAAGATTCTGCACAATGACCCAGAAGTGAGAAGAAGCAGGGCTGGACC
 ACCGTGGGGGACATGGAGGGCTCGGGGCACTACCGTGTGTGAAATACGAGCGGATTAG
 TTCCTGGTTCATCGCCCTCAAGAGCTCCGTGGAGGTGTATGCTGGGGCCCCAACCCCTAC
 CACAAATTCATGGCCTTCAAGTCTTTGCCGACCTCCCCACCGCCCTCTGTGCTGGTCGAC
 CTGACAGTAGAGGAGGGGACGGGCTCAAGGTCATCTATGGCTCCAGTGTGCTGCTTCCAT
 GCTGTGGATGTGCACTCGGGGAACAGCTATGACATCTACATCCCTGTGCACATCCAGAGC
 CAGATCACGCCCCATGCCATCATCTTCTCCCAACACCGACGGCATGGAGATGCTGCTG
 TGCTACGAGGACGAGGGTGTCTACGTCAACACGTACGGGCGCATCATTAAAGGATGTGGTG
 CTGCACTGGGGGAGATGCTTCTGTGGCTTACATCTGCTCCAACAGATAATGGGC
 TGGGGTGAGAAAGCCATTGAGATCCGCTCTGTGGAGACGGGCCACCTCGACGGGGTCTTC
 ATGCACAAACGAGCTCAGAGGCTCAAGTTCCTGTGTGAGCGGAATGACAAGGTGTTTTT
 GCCTCAGTCCGCTCTGGGGGACGAGCAAGTTTACTTCATGACTCTGAACCGTAACCTGC
 ATCATGAACGTGGTGAAGGGC

Mink3b protein sequence

1 MDVTEDEEEE IKQE INMLKKYSHRNIAITYYGAFIKKSPPGNDDQLWLVMEFCGAGSVTD
 61 LVKNTKGNALKEDCIAYICRE ILRGLAHLHAKVHIRD IKQONVLLTENAEVKLVDFGVS
 121 AQLDRTVGRNFTFIGTPYWMAPEVIACDENPDATYDYRSDIWSLGITAIEMAEGAPPLCD
 181 MHPMRALFLIPRNPPLRLKSKKWSKKFIDFIDTCLIKTYLSRPPTQLLKFPFIRDQPT
 241 RQVRIQLKDHIDRSRKKRGEKEETEYEYSGSEEDDSHGEEGEPSSIMNVPGESTLRRF
 301 LRLQENKSNSEALKQQQQQLQQQQORDPEAH IKHLLHQRRRIEEQKEERRRVEEQORRE
 361 REQRKLQEQEQQRLEDMMQALRREERQAEQEYKRKQLEEQRQSERLQRLQEQEHAY
 421 LKSLQQQQQQQQQLQKQQQQQLLPGRKPLYHYGRGMNPADKPAWAREVEERTRMNKQONS
 481 PLAKSKPGSTGPEPPI PQASPGPPGPLSQTPPMQRFVEPQEGPHKSLVAHRVPLKPYAAP
 541 VPRSQSLQDQPTRNLAAFPASHDPDAI PAPTATPSARGAVIRONSDPTSEGPGPSNPP
 601 AWRVPDNEAPPKVPQRTSSIALNTSGAGGSRPAQAVRARPRSNSAWQIYLORRAERGT
 661 PKPPGPPAQPPGPPNASSNPDLRRSDPGWERSDSVLPASHGHL PQAGSLERNRVGASSKL
 721 DSSPVLSPGNKAKPDDHRSRPGRPVSHLVAGMACLILVWGLASGCWVSGVGSPLIYREG
 781 LWGWRDWCFSWC

Mink3b nucleotide sequence

GCCCTT
 ACCATTCTGGAAGCTCCCTAGAACTCTCTGGAATGCTTAATGGACCTTTCCAGCACCGAA
 ATCAAGAATTATGACTCATCGGTCAGCAGAAAAGACCCTGCTGGGATCTTTGAGCTTGT
 GGAGGTGGTCGGCAATGGAACCTACGGACAGGTGTACAAGGGTCGGCATGTCAAGACGGG
 GCAGCTGGCTGCCATCAAGGTCATGGATGTACGGAGGACGAGGAGGAAGAGATCAAACA
 GGAGATCAACATGCTGAAAAAGTACTCTACCACCGCAACATCGCCACCTACTACGGAGC
 CTTGATCAAGAAGAGCCCCCGGGAACAGTACACAGCTCTGGCTGGTGATGGAGTTCTG
 TGGTGCTGGTTTCACTGACTGACCTGGTAAAGAACACAAAAGGCAACGCCCTGAAGGAGGA
 CTGTATCGCTATATCTGCAGGGAGATCCTCAGGGGTCTGGCCCATCTCCATGCCCCAAA
 GGTGATCCATCGAGACATCAAGGGGCGAATGTGCTGCTGACAGAGAATGCTGAGGTCAA
 GCTAGTGGATTTTGGGCTGAGTGTCTCAGCTGGACCGCACCGTGGGCAGACGGAACACTT
 CATTGGGACTCCCTACTGGATGGCTCCAGAGGTATCGCCTGTGATGAGAACCCTGATGC
 CACCTATGATTACAGGAGTGATATTGGTCTCTAGGAATCACAGCCATCGAGATGGCAGA
 GGGAGCCCCCTCTGTGTGACATGCACCCATGCGAGCCCTCTTCTCATTCTCGGAA
 CCTCCCGCCAGGCTCAAGTCCCAAGAAGTGGTCTAAGAAGTTCACTTGACTTCATGACAC
 ATGTCTCATCAAGACTTACCTGAGCCGCCCCACCCACGGAGCAGCTACTGAAGTTTCCCTT
 CATCCGGGACCGCCACGGAGCGGCAGGTCCGCATCCAGCTTAAGGACCACATTGACCG
 ATCCCGGAAGAAGCGGGGTGAGAAAGAGGAGACAGAATATGACTACAGCGGCAGCGAGGA

Fig. 1

GGAAGATGACAGCCATGGAGAGGAAGGAGAGCCAGCTCCATCATGAACGTGCCTGGAGA
 GTCGACTCTACGCCGGGAGTTTCTCCGGCTCCAGCAGGAAAATAAGAGCAACTCAGAGGC
 TTTAAACACAGCAGCAGCAGCTGCAGCAGCAGCAGCAGCGAGACCCGAGGCACACATCAA
 ACACCTGCTGCACCAGCGGCAGCGGCATAGAGGAGCAGAAGGAGGAGCGCGCCGCGT
 GGAGGAGCAACAGCGCGGGAGCGGGAGCAGCGGAAGCTGCAGGAGAAGGAGCAGCAGCG
 GCGGCTGGAGGACATCCCGCTGCGGCTGCGGCGGGAGGAGGCGCGCGGAGCGCTGA
 GCAGGAATACAAGCGGAAGCAGCTGGAGGAGCAGCGGCAGTCAGAACGCTCTCCAGAGGCA
 GCTGCAGCAGGAGCATGCCTACCTCAAGTCCCTGCAGCAGCAGCAACAGCAGCAGCAGCT
 TCAGAAACAGCAGCAGCAGCAGCTCCTGCCTGGGGACAGGAAGCCCTGTACCATTATGG
 TCGGGGCATGAATCCCGCTGACAAACCAGCCTGGGCCGAGAGGTAGAAGAGAGAACAAG
 GATGAACAAGCAGCAGAACTCTCCCTTGGCCAAGAGCAAGCCAGGCAGCAGCGGGCCTGA
 GCCCCCCATCCCCAGGCCTCCCCAGGGCCCCAGGACCCCTTTCCAGACTCCTCCTAT
 GCAGAGGCGGTGGAGCCCGAGGAGGACCGCACAAAGAGCCTGGTGGCACACCGGGTCCC
 ACTGAAGCCATATGCAGCACCTGTACCCCGATCCAGTCCCTGCAGGACCAGCCCACCCG
 AAACCTGGCTGCCTTCCCAGCTCCCATGACCCCGACCTGCCATCCCCGACCCACTGC
 CACGCCAGTGCCCGAGGAGCTGTATCCGCCAGAATTCAGACCCACCTCTGAAGGACC
 TGGCCCCAGCCCCGAATCCCCAGCCTGGGTCCGCCAGATAACGAGGCCCCACCCAGGT
 GCCTCAGAGGACCTCATCTATGCCACTGCCCTTAACACCAAGTGGGGCCGAGGGTCCCG
 GACAGCCCAGGCAGTCCGTGCCAGACCTCGCAGCAACTCCGCTGGCAAATCTATTCGCA
 AAGGCGGGCAGAGCGGGGACCCCAAAGCCTCCAGGGCCCCCTGCTCAGCCCCCTGGCCC
 GCCCAACGCCCTTAGTAACCCCGACCTCAGGAGGAGCGACCTGGCTGGGAACGCTCGGA
 CAGCGTCTTCCAGCTCTCAGGGGACCTCCCCAGGCTGGCTCACTGGAGCGGAACCG
 CGTGGGAGCCTCCTCAAACCTGGACAGCTCCCTGTGCTCTCCCTGGGAATAAAGCCAA
 GCCCGAGCACCCGCTCAGCGCCAGGCGCGGCCGCGCAGTGAGTCACTGGTGGCAGGCAT
 GGCTGCCTCATCTGGTTTGGGGCTTAGCCTCAGGGTGTGGGTGTGAGGGTGGGGTCT
 TCCGCTGATCTACCGAGAAGGGCTGTGGGGATGGAGGAGTGGTGTCTCATGGTGCTA
 ACCTTTCTTAACCTCTCTCAACCTCTCTCCTAACCCTCTCTTCTGGCTTTCTTCCCC
 TGGCGCCCCCTCCAGAGCTATAAGCGAGCAATTGGTGAGGTTAGTGAGATGGGCTGCTT
 GTGGGAGCCCTCCTGTGCGCCTGTGGGGCGTCCCGGCACCCCTTGTCTACCTCCACCC
 AGCCCCAGCTTCTCCTGCCCTCAGTGGCTCCTCCTGCAGGACTTTGTGTGTCTGAA
 AGAGCGGACTCTGGACGAGGCCCTCGGCTCCCAAGAAGGCATGGACTACTCGTCGTC
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 GGTGGTCCACGACGTGAGGAGATCACCGGGACCCAGCCCCATACGGGGCGGCACCAT
 GGTGGTCCAGCGCACCCCTGAAGAGGAGCGGAACCCGCTGCATGCTGACAGCAATGGGTA
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 AAGCCACCCCTCGAAGGATGGGAGTGGTGACTACAGTCTCGTGGGCTGGTAAAGGCCCC
 TGGCAAGAGCTCGTTCACGATGTTTGTGGATCTAGGATCTACAGCCTGGAGGCGATGG
 GGACAGCATCCCCATCACAGCCCTAGTGGGTGGAGAGGCGACTCGGCTCGACCAGCTGCA
 GTACGACGTGAGGAAGGGTCTGTGGTCAACGTGAATCCCAACACCCGGGGCCACAG
 TGAGACCCCTGAGATCCGGAAGTACAAGAAGCGATTCAACTCCGAGATCCTCTGTGCAGC
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 TGGGCAGGACAAGGTGTATGGACTATTGGGCGACGACGCTCCAGCAGATGGATGTGCT
 GGAGGGGCTCAACCTGCTCATCACCATCTCAGGGAAGGAACAACTGCGGGTGTATTA
 CCTGTCTGGCTCCGGAACAAGATTCTGCACAATGACCCAGAGTGGAGAAGAAGCAGGG
 CTGGACCACCGTGGGGGACATGGAGGGCTGCGGGCACTACCGTGTGTGAAATACGAGCG
 GATTAAGTTCTGGTCTATGCCCTCAAGAGCTCCGTGGAGGTGTATGCTGGGCCCCAA
 ACCCTACCAAAATTCAGGCTTCAAGTCTTTGGCGACCTCCCCACCGCCCTCTGCT
 GGTGACCTGACAGTAGAGGAGGGGACGGCTCAAGGTCTATGCTCCAGTGCTGG
 CTTCATGCTGTGGATGTGACTCGGGGAACAGCTATGACATCTACATCCCTGTGCACAT
 CCAGAGCCAGATCAGCCCCATGCCATCATCTCTCCCCAACCCGACGGCATGGAGAT
 GCTGCTGTGTACGAGGACGAGGGTGTCTACGTCAACACGTACGGGCGCATCATTAAGGA
 TGTGGTGTGACGTGGGGGAGATGCCTACTTCTGTGGCCTACATCTGCTCCAACCAGAT
 AATGGGCTGGGGTGAGAAAGCCATTGAGATCCGCTCTGTGGAGACGGGCCACCTCGACGG
 GGTCTTCATGCACAAACGAGTTCAGAGGCTCAAGTCTGTGTGAGCGGAATGACAAGGT
 GTTTTTGCTCAGTCCGCTCTGGGGGACGAGCCAAGTTTACTTCATGACTCTGAACCG
 TAACTGCATCATGAAGTGGTGAAGGGC

Mink3c protein sequence

1 MDVTEDEEEEEIKQEINMLKKYSHHRNIATYYGAFIKKSPPGNDQQLWLVMFCGAGSVTD
 61 LVKNTKGNALKEDCIAYICREILRGLAHLHAHKVIHRDIKQNVLLTENAIEVKLVDFGVS
 121 AQLDRITVGRNRNFIGTGYWMAPEVIACDENPDATYDYRSDIWSLGTAEIEMAEAPPLCD
 181 MHPMRALFLIPRNPPLRLSKKWSKKFIDFIDTCLIKTYLSRPPTEQLLKFPFIRDQPT
 241 RQVRIQLKDHIDRSRKKRGEKEETEYYSYSGSEEDDSHGEEGEPSSIMNVPGESTLRREF
 301 LRLQENKSNSEALKQQQQQLQQQQQRPDAHIKHLHQRRRIEEOKEERRRVEEQQRRG
 361 REQRKLQEKQRRLEDMQALRREEERRQAEREQEYKRKQLEEQRQSERLQRLQOEHA
 421 LKSLQQQQQQQLQKQQQQQLLPGRKPLYHYGRGMNPADKPAWAREVEERTRMNKQONS
 481 PLAKSKPGSTGPEPPIQASPGPPGPLSQTPPMQRPVEPQEGPHKSLVAHRVPLKPYAAP

Fig. 1

541 VPRSQSLQDQPTRNLAAFPASHDPDPAIPAPTATPSARGAVIRQNSDPTSEGGPSPNP
601 AWVRPDNEAPPKVPQRTSSIALNTSGAGGSRAQAVRARPRSNSAWQIYLQRRARERT
661 PKPPGPPAQPPGPPNASSNPDLRRSDPGWERSDSVLPASHGHLPPQAGSLERNRVGASSKL
721 DSSPVLSPGNKAKPDDHRSRPGRPADFVLLKERTLDEAPRPPKKAMDYSSSSSEEVESSED
781 DEEEGEGGPAEGRSDTPGGRDGDTSVSTMVHDVEEITGTQPPYGGGTMMVQRTPEEER
841 NLLHADSNGYTNLPDVVQPSHSTENSCKGQSPSKDGSDQYQSRGLVKAPGKSSFTMFVD
901 LGIYQPGGSGDISIPITALVGGEGTRLDQLQYDVRKGSVVNVNPTNTRAHSETPEIRKYKK
961 RFNSEILCAALWGVNLLVGTENGLMLLDRSGQGKVGYLIGRRRFQOMDVLEGLNLLITIS
1021 GKRNKLRVYYLSWLRNKILHNDPEVEKKQGWTTVGDMEGCGHYRVVKYERIKFLVIALKS
1081 SVEVYAWAPKPYHKFMAFKSFADLPHRPLLVDLTVEEGQRLKVIYGSSAGFHAADVDSGN
1141 SYDIYIPVHIQSGITPHAIIFLPNTDGMEMLLCYEDEGVYVNTYGRIIKDVVLQWGEMPT
1201 SVAYICSNIGMWGEKAIEIRSVETGHLDGVMHKRAQLKFLCERNKDVFFASVRSGBS
1261 SQVYFMTLNRNCIMNW

Mink3c nucleotide sequence

TATGGACCTTTCCAGCACCGAAATTCAAGAATTATGACTCATCGGTACGAGAAAGAC
CCTGTGGCATCTTTAGCTTTGGGAGGTTGGTCCGCAATGGAACCTTGGAGACGGTGTAC
AAGGTCGGCATGTTCAAGACGGGCGAGCTGGTGCATCAAGGTCATGGATGTCACGGAG
GACGAGGAGGAAGAGATCAAACAGGAGATCAACATGCTGAAAAAGTACTCTCACCACCGC
AACATCGCCACCTACTACCGAGGACCTTCATCAAGAAGAGCCCGCCGGAAACGATGACCAG
CTCTGGCTGGTGATGGAGTTCCTGTGGTGGTGGTTCAGTGTGACTGACCTGGTAAAGACACA
AAAGGCAACGCCCTGAAAGGAGGACTGTATCGCCTATATCTCGAGGAGATCTCTCAGGGT
CTGGCCCATCTCCATGCCACAAGGTGATCCATCGAGACATCAAGGGGACGAATGTGCTG
CTGACAGAGAATGCTGAGGTCAAGCTAGTGGATTTTGGGGTGGTGTGCTCAGCTGGACCG
ACCGTGGGCAGACGGAACACTTTATTGGGACTCCCTACTGGATGGCTCCGAGGTTCTATC
GCCTGTGATGAGAACCTGATGCCACCTATGATTACAGGAGTGATATTTGGTCTCTAGGA
ATCACAGCCATCGAGATGGCAGAGGAGGCCCGCCCTCTGTGTGACATGCACCCCATGCGA
GCCCTTCTCTCATCTCTCGAAACCTTCGCCACGGCTCAAGTCCAAAGAAGTGGTCTAAG
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GAGCAGCTACTGAAGTTTCCCTTCATCCGGGACAGCCACGAGCGGCGAGGTCCGATC
CAGCTTAAGGACCACTTACGCGATCCCGGAAGAAGCGGGGTGAGAAAGGAGGACAGAA
TATGAGTACCGCGCAGCGGAGGAGGAAGTACAGCCATGGAGAGGAAGGAGGCCAAG
TCCATCATGAAGCTGCCGTGGAGAGTCGACTCTACGCCGGGAGTTTCTCCGGCTCCAGCAG
GAAAATAAGAGCACTCAGAGGCTTTAAACAGCAGCAGCAGCTGCAGCAGCAGCAGCAG
CGAGACCCGAGGCACACATCAACACCTGCTGCACCGCGCAGCGCGCATAGAGGAG
CAGAAGGAGGAGCGGCGCCGCTGGAGGAGCAACAGCGCGCGGGGCGGGAGCAGCGGAAG
CTCGAGGAGAAGGAGCAGCAGCGCGCGCTGGAGAGATCGAGGCTCTCGCGCGGGAGGAG
GAGCGCGCGCAGCGGAGCGGTGAGCAGGAATACAAGCGGAAGCTGAGGAGCAGCGG
CAGTCAGAACGCTCTCCAGAGGCAGCTGAGCAGAGGAGCATGCCTACCTCAAGTCCCTGCAG
CAGCAGCAACAGCAGCAGCAGCTTCAGAAACAGCAGCAGCAGCAGCTCCTGCCTGGGGAC
AGGAAGCCCTGTACCATATTTGTTGGTGGGCGACTGAATCCCGCTGACAAACCGACTGGGC
CGAGAGGTGAAGAGGAATAAGGATGAACAAGCAGCAGAACTCTCCTTGGCCAGAGGC
AAGCCAGGCAGCAGCGGGCCTGAGCCCCCATCCCCAGGCCTCCCCAGGGCCCCCAGGA
CCCCTTCCAGACTCTCCTTACCTGAGAGGCGCGGTGGAGGCCAGGAGGAGCCGCAAG
AGCCTGTGTGGCACACCGGGTCCCATGAGCCATATGACAGCACTGTACCCCGATCCCGAG
TCCCTGCAGGACCGAGCCACCCGAAACCTGGCTGCCTTCCAGCCTCCCATGACCCCGAC
CTCTGCCATCCCCGCACTCCAGCACTGCCACGCCAGTGGCCGAGGAGTGTCATCCGCCAGAA
TCAGACCCCACTCTTAAGCACTTGGCCCGACCGCAATCCCCAGCTGGGTCCGCCCA
GATAACGAGGCCCCACCCAAGGTGCCTCAGAGGACCTCATCTATCGCCACTGCCCCTTAAC
ACCAAGTGGGGCGGAGGGTCCCGGCCAGCCGAGCAGTCGCTGCCAGACCTCGCAGCAAC
TCCGCTTGCCAATCTATCTGCAAAAGCGGGCAGAGCGGGGACCCCAAGCCTCCAGGG
CCCCCTGCTCAGCCCCCTGGCCCGCCCAACGCTCTAGTAAACCGCACTCAGGAGGAGC
GACCTTGGTGGGAACGCTCGGACAGCGTCTCTTACAGCCTCTCACGGGCACTCCCCCAG
CTGTGGTCACTGGAGCGGAACCGCTGGGAGCCTCTCTCCAAACTGGACAGCTCCCTGTG
CTCTCCCTGGGAATAAGCCAAAGCCGACGACCACCGCTCACGGCGAGCGCGGCCGCA
GACTTTGTGTTGCTGAAAGAGCGGACTCTGGACGAGGGCCCTCGGCCTCCCAAGAAGGCC
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GAAGCGGGGCACGACGAGGGGACGAGATACCAAGCTTGGGGCGCGCATGGGATACAGAC
AGCGTCAGCACCATGGTGGTCCACGACGCTCAGGAGATACCCGGGACCCAGCCCCATAC
GGGGCGCGGCACCATGGTGGTCCAGCGCACCCCTGAAAGGAGAGCGAAACCTGCTGATGCT
GACAGCAATGGGTACAAACCTCGCTGACGTGGTTCAGGCCAGCCAGCACTCACCACCCAG
AACAGCAAGGCGCAAGGCCACCTCGAAGGATGGGAGTGGTGACTACCAAGTCTCGTG
CTGGTAAAGGCCCTTGGCAAGAGCTCGTTCACAGTGTTTGTGGATCTAGGGATCTACCG
CCTGGAGGCGAGTGGGACAGCATCCCCATCAGCATGCTTAGTGGGTGGAGGGGCACTCGG
CTCGACAGCTGCAGTACAGCTGAGGAAGGGTTCTGTGGTCAAGTGAATCCCCAACCA

ACCCGGGCCACAGTGAGACCCCTGAGATCCGGAAGTACAAGAAGCGATTCAACTCCGAG
 ATCCTCTGTGCAGCCCTTTGGGGGGTCAACCTGCTGGTGGGCACGGAGAACGGGCTGATG
 TTGCTGGACCGAAGTGGGCAGGGCAAGGTGTATGGACTCATTGGGCGGCGACGCTTCCAG
 CAGATGGATGTGCTGGAGGGGCTCAACCTGCTCATCACCATCTCAGGGAAAAGGAACAAA
 CTGCGGGTGTATTACCTGTCTGGCTCCGGAACAAGATTCTGCACAATGACCCAGAAGTG
 GAGAAGAAGCAGGGCTGGACCACCGTGGGGGACATGGAGGGCTGCGGGCACTACCGTGT
 GTGAAATACGAGCGGATTAAGTTCCTGGTCATCGCCCTCAAGAGCTCCGTGGAGGTGTAT
 GCCTGGGCCCCCAAACCTACCACAAATTCATGGCCTTCAAGTCCTTTGCCGACCTCCCC
 CACCGCCCTCTGCTGGTTCGACCTGACAGTAGAGGAGGGGCAGCGGCTCAAGGTCATCTAT
 GGCTCCAGTGTGGCTTCCATGCTGCGGATGTCGACTCGGGGAACAGCTATGACATCTAC
 ATCCCTGTGCACATCCAGAGCCAGATCACGCCCCATGCCATCATCTTCCTCCCCAACACC
 GACGGCATGGAGATGTGCTGTGCTACGAGGACGAGGGTGTCTACGTCAACACGTACGGG
 CGCATCATTAAGGATGTGGTGTGCTGCAAGTGGGGGAGATGCCTACTTCTGTGGCCTACATC
 TGCTCCAACCAGATAATGGGCTGGGGTGAGAAAGCCATTGAGATCCGCTCTGTGGAGACG
 GGCCACCTCGACGGGGTCTTCATGCACAAACGAGCTCAGAGGCTCAAGTTCCTGTGTGAG
 CGGAATGACAAGGTGTTTTTGGCTCAGTCCGCTCTGGGGGCAGCAGCCAAGTTTACTTC
 ATGACTCTGAACCGTAACCTGCATCATGAAGTGGTGA

10029115.101901

Fig. 1
 Sheet 5

The structure of Mink proteins

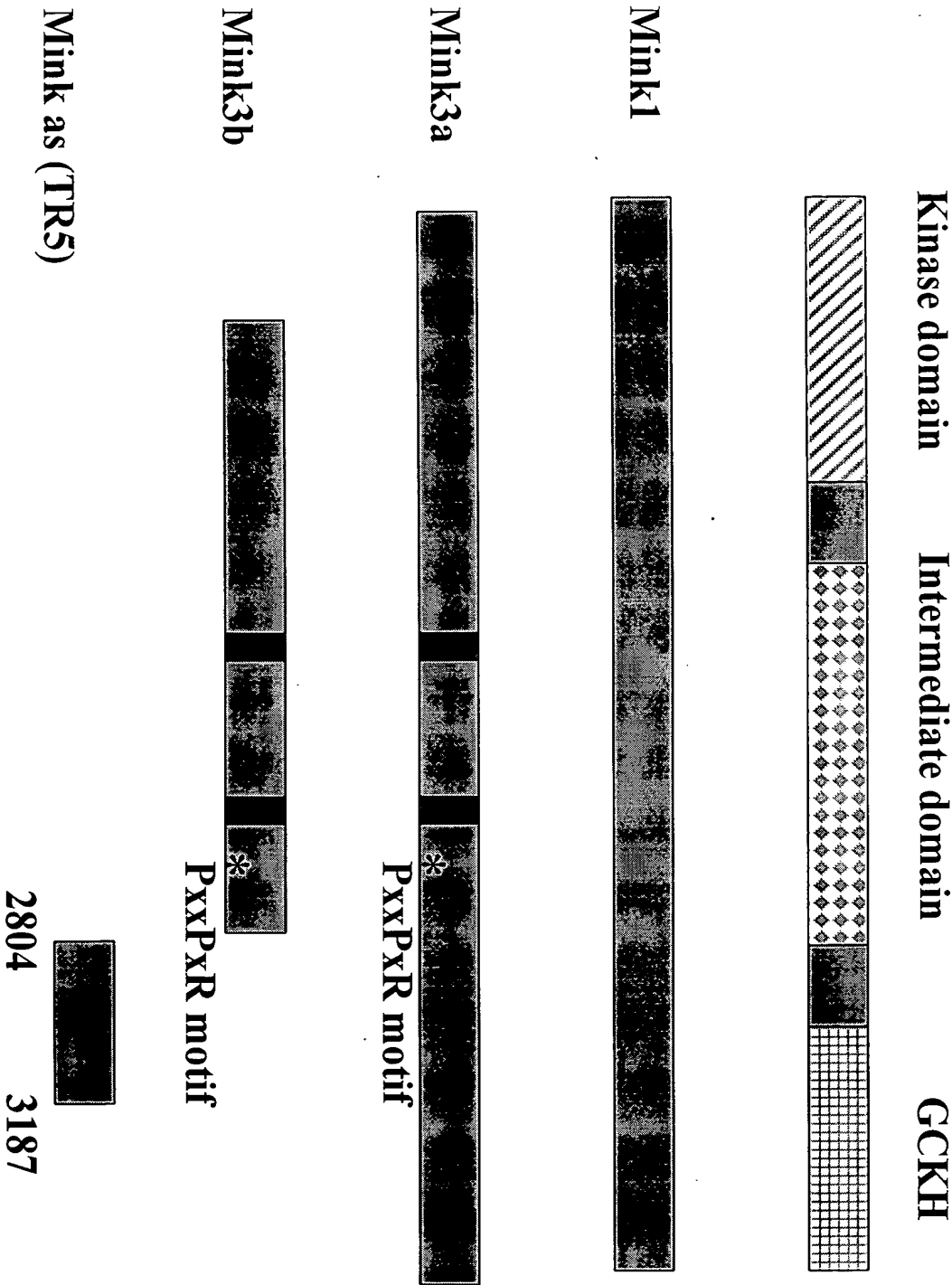


Fig. 2

TR5 inhibits the transcriptional activity of AP1-luciferase reporter gene in 293 cells

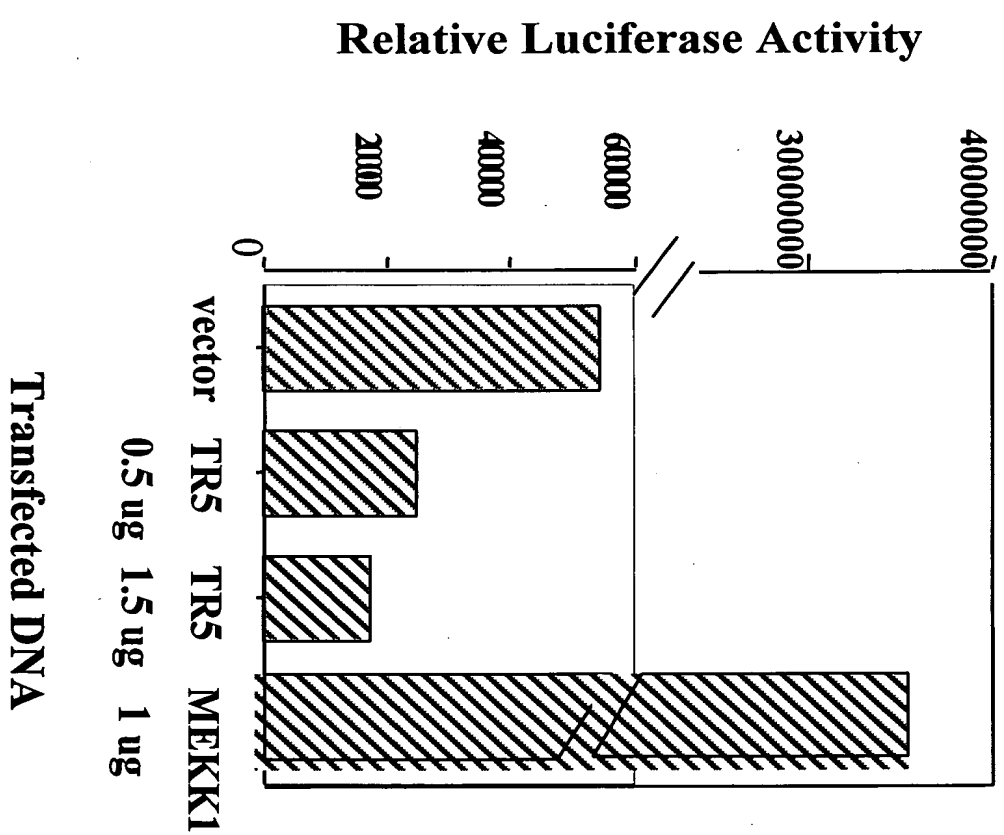


Fig. 3

Signal pathways regulating Taxol-mediated apoptosis

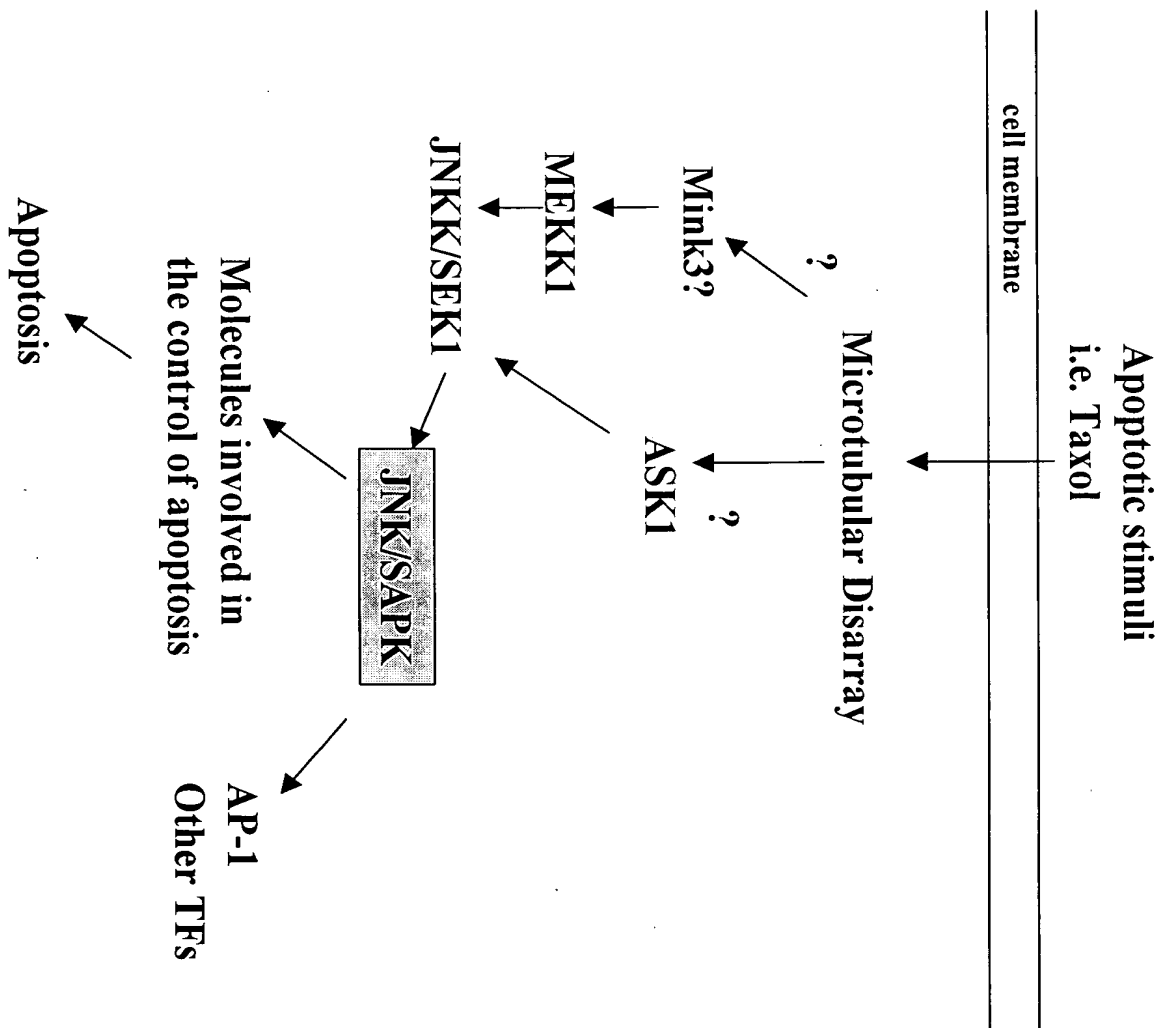


Fig. 4

The signal transduction of MAPK pathways

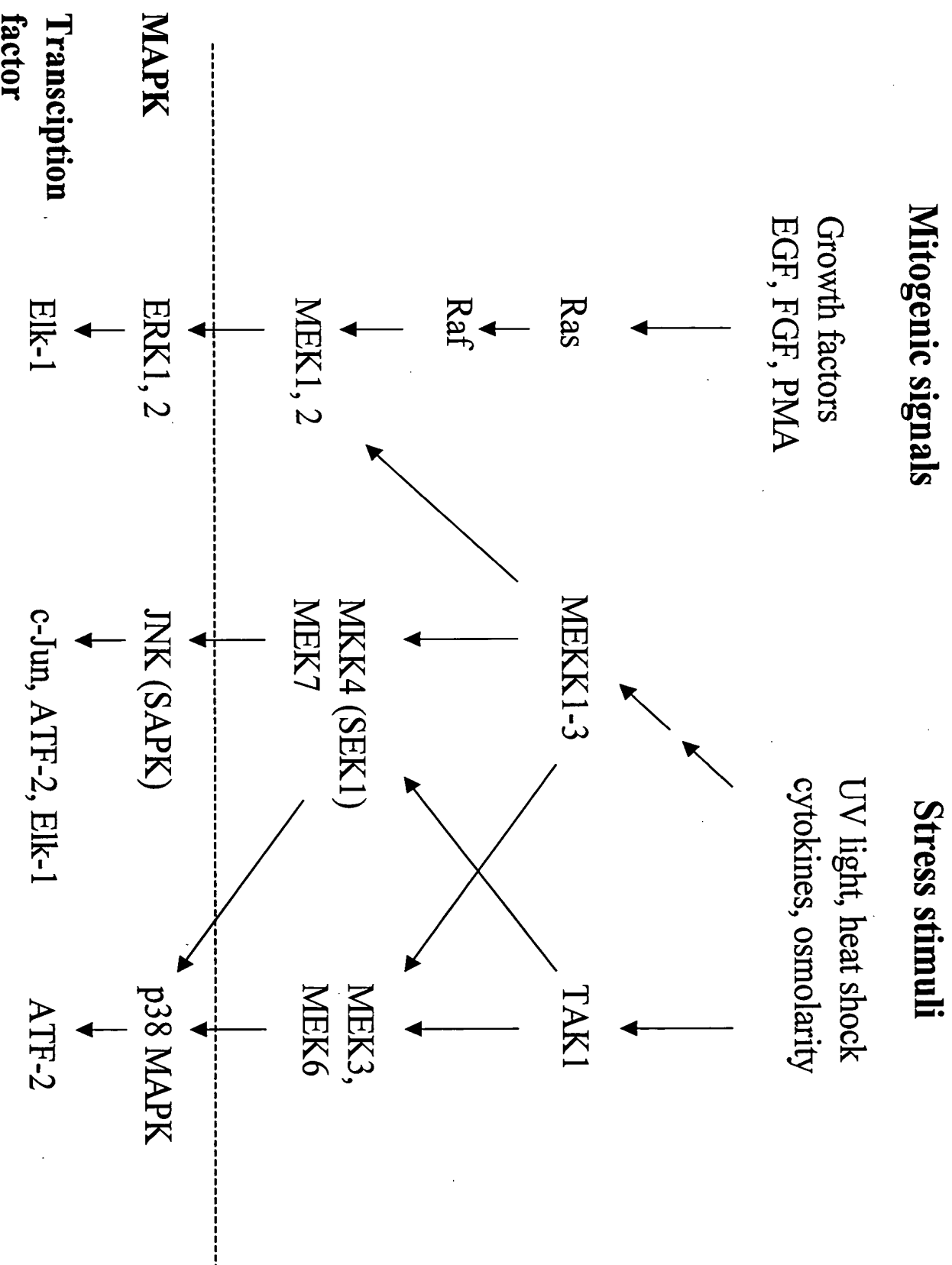


Fig. 5

The MAPK signaling pathway

Mitogens Cytokines Cellular Stress

MAP4K

GCK HBP1 GLK KHS HGK TNK Wnk



MAP3K

ASK1 MEKK1,2,3,4 Tpl2 MLK3 LZK
MAP3K6 TAK1 MLK2 MLK



MAP2K

MKK4 MKK7



MAPK

JNK1 JNK2 JNK3

Fig. 6

3 λ Expression antisense of Mink confers Taxol-resistance in HeLa cells

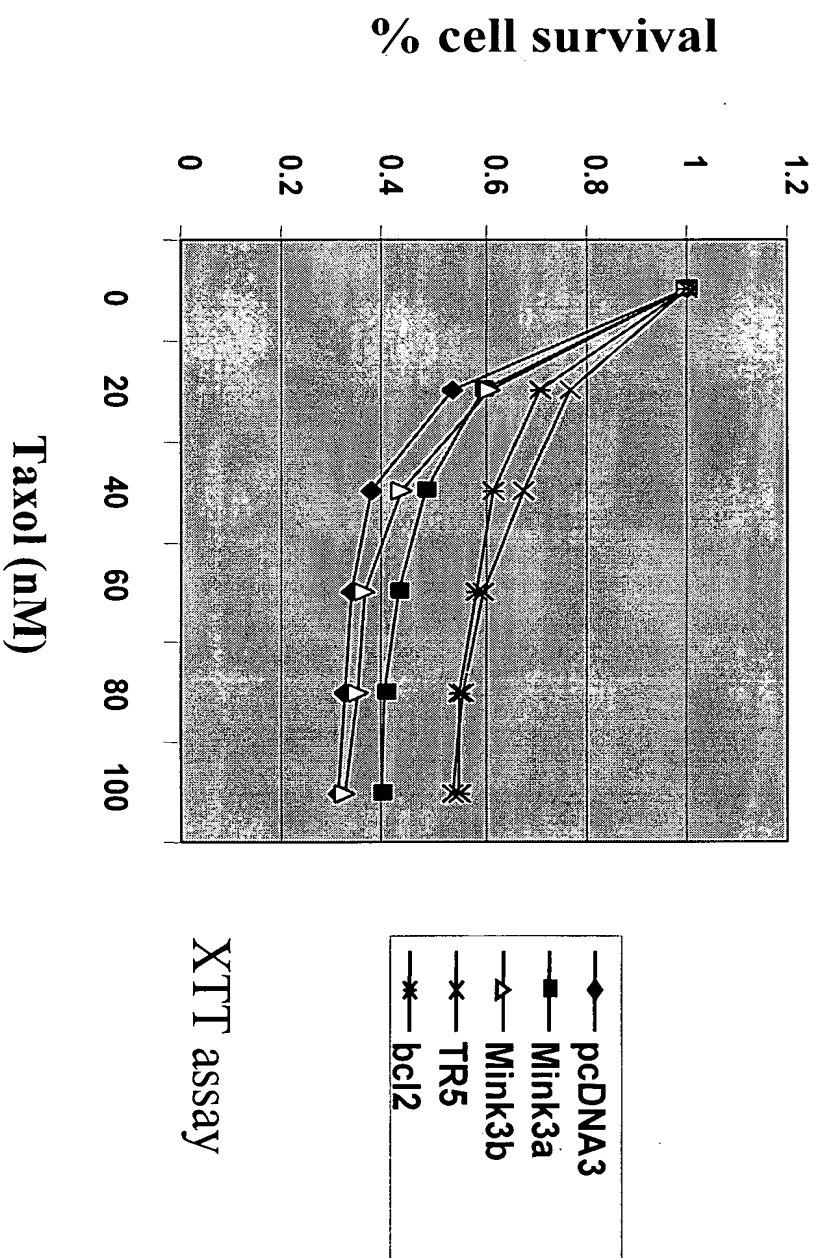


Fig. 7

Expression of Mink3a in A549 cells slows down the cell growth in low serum medium

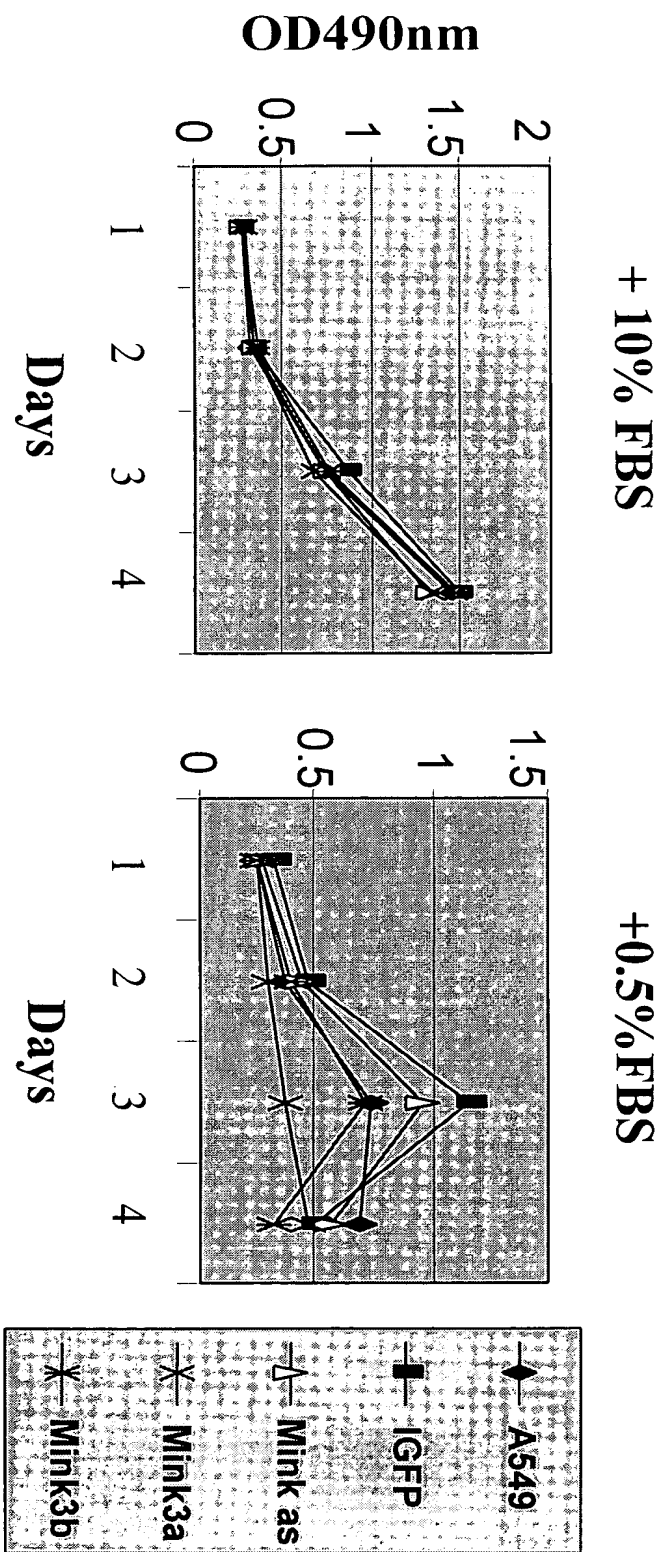


Fig. 8

Expression of antisense of Mink inhibits EGF-mediated induction of ERK signal pathway

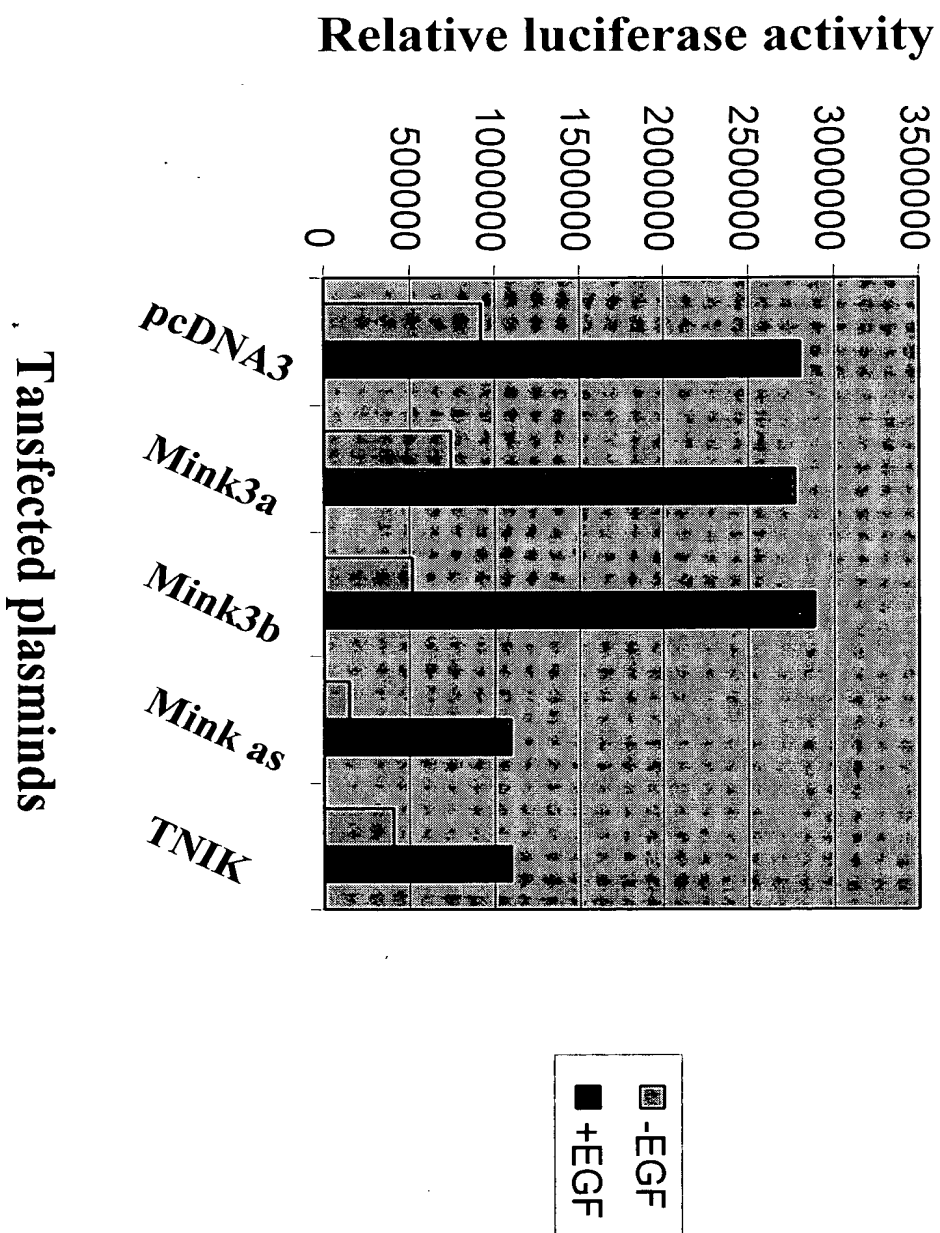


Fig. 9

TR5 and Bcl2 block Taxol-induced cleavage of Rb protein

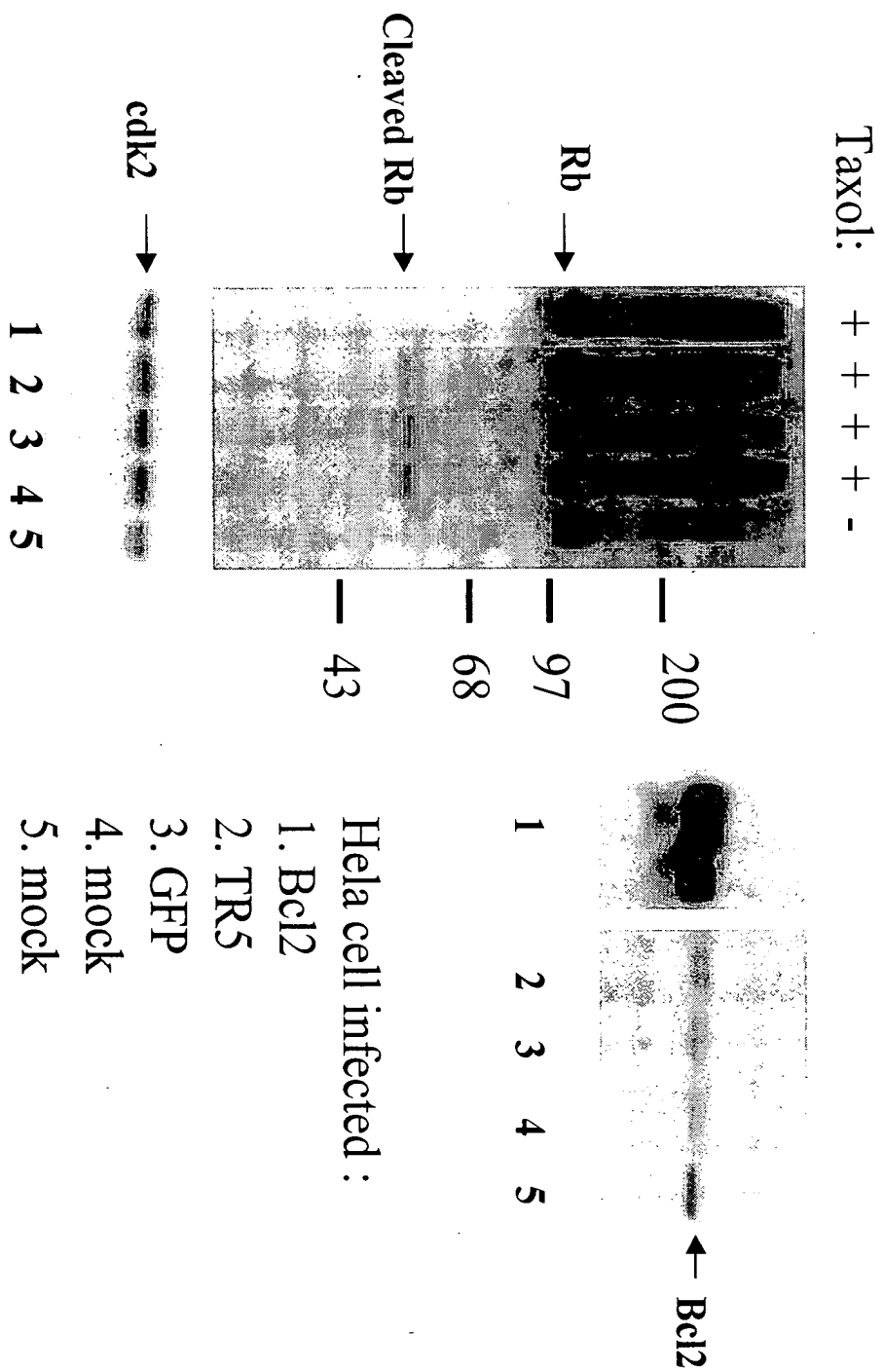


Fig. 10

Expression of Mink3 message in human tissue

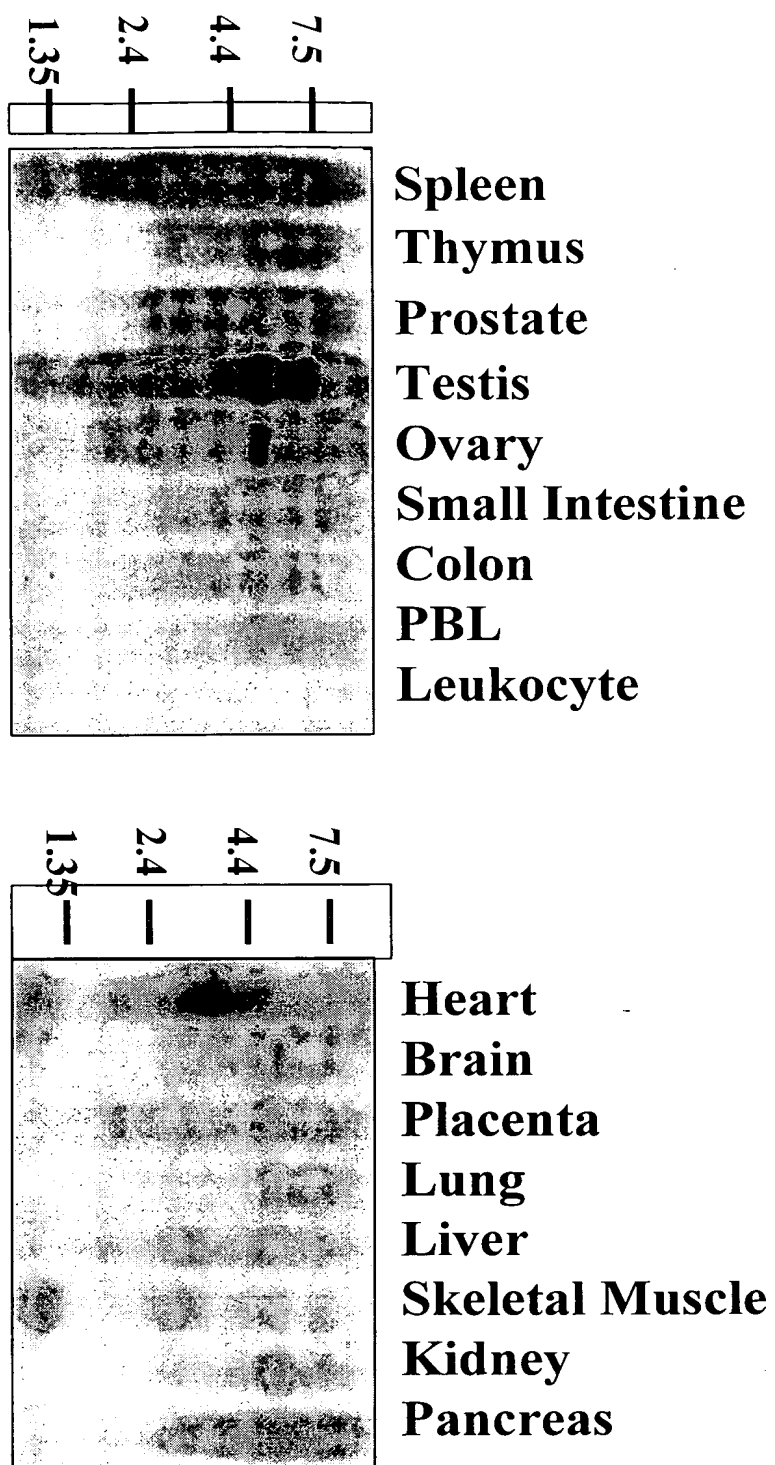


Fig. 11

Expression of Mink3 message in tumor cell lines

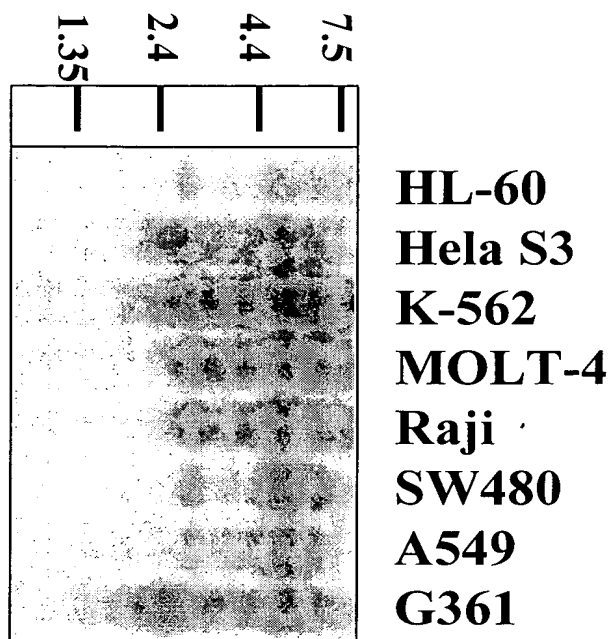


Fig. 12

Mink3a activates JNK and ERK pathways

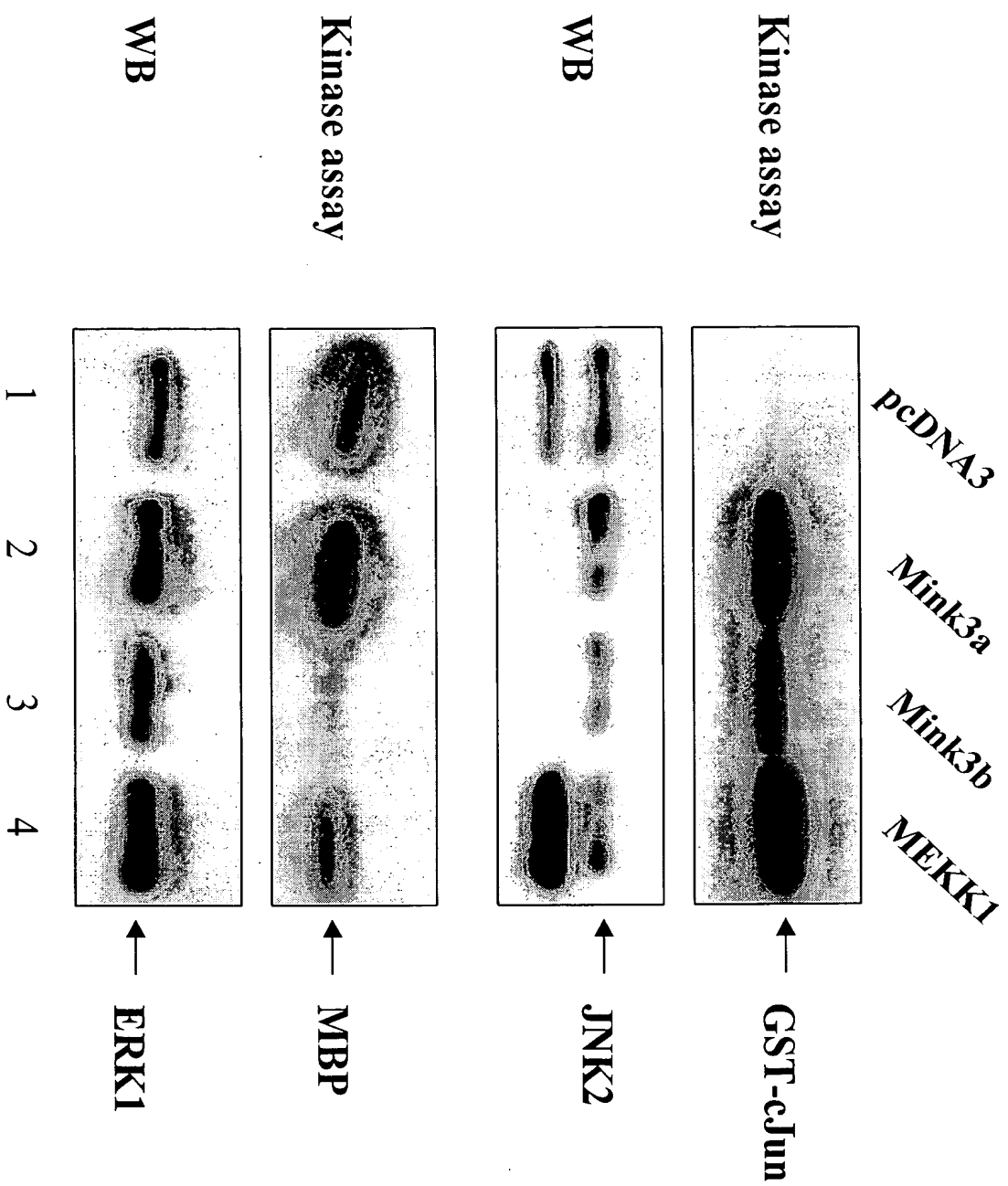


Fig. 13

Expression of Mink3a in MDA-MB-231 cells causes the cellular morphological change

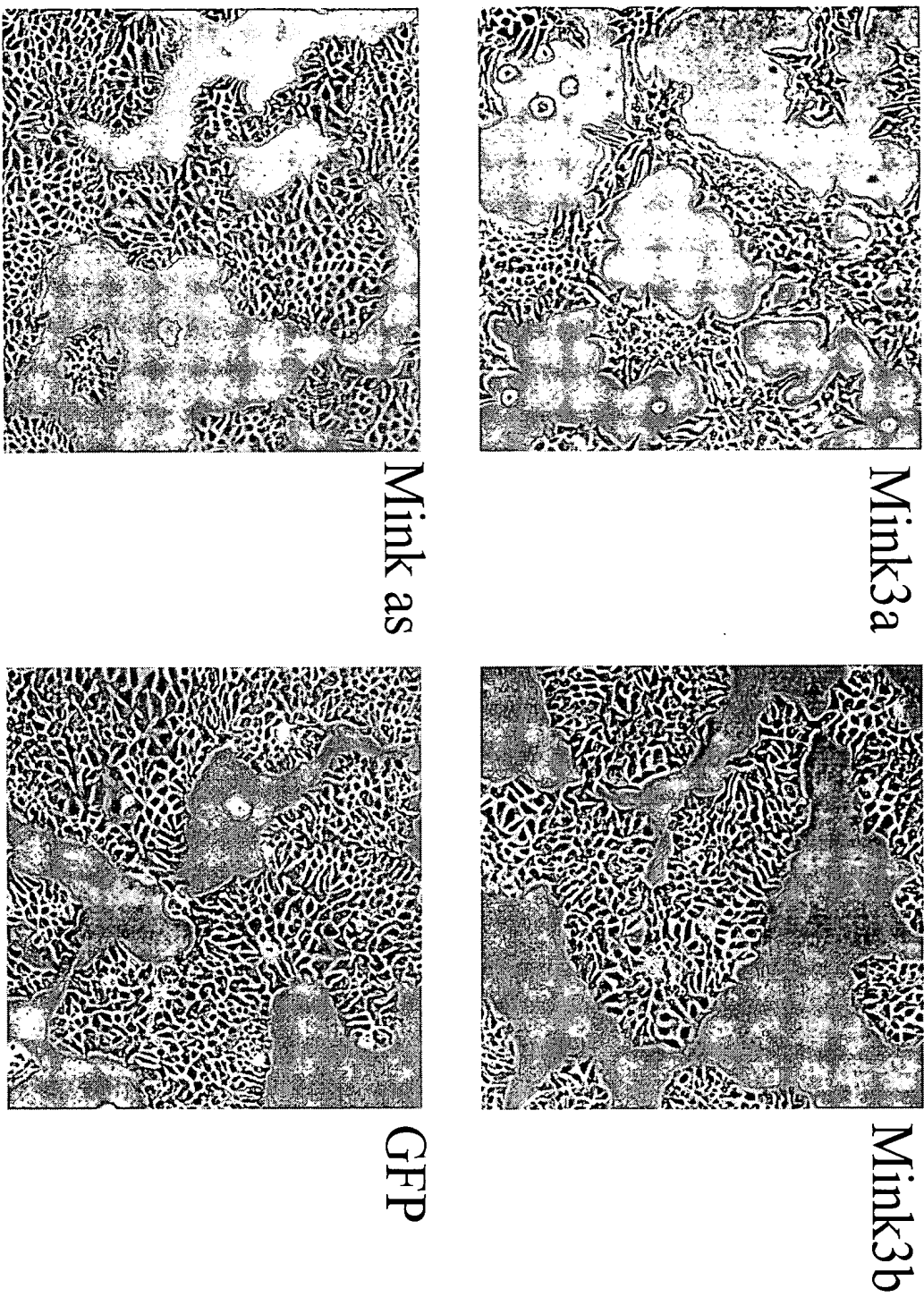
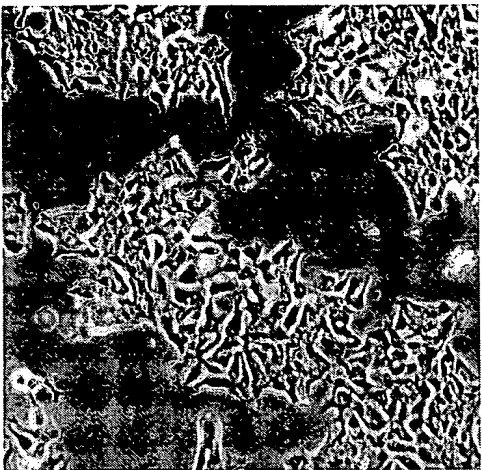
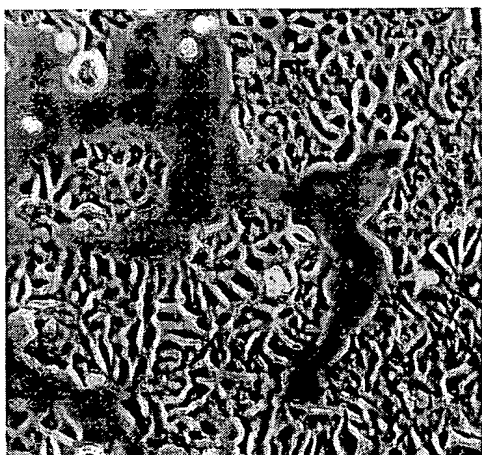


Fig. 14

MEK inhibitor restore the morphology of Mink3a infected MDA-MB-231 cells



Mink3a



Mink3a
+PD98059



MDA-MB-231

Fig. 15